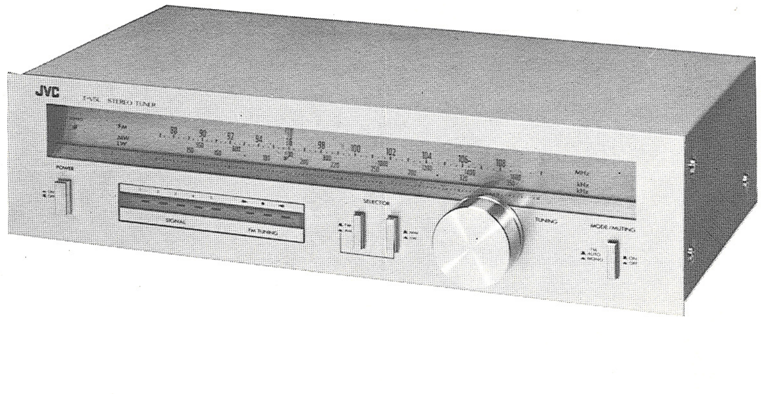
JVC

SERVICE MANUAL

MODEL
T-V5L

STEREO TUNER



No. 2483
Feb. 1979

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WARNING!
When replacing the parts marked with ⚠ , be sure to use the designated parts to ensure safety.

1. Specifications

FM Tuner Section
Tuning Range : 87.6 MHz – 108 MHz
Usable Sensitivity (IHF) : 10.3 dBf
0.9 μV/75 Ω
50 dB quieting sensitivity
Mono : 14.8 dBf 1.5μV/75Ω
Stereo : 38.3 dBf 22.5μV/75Ω
S/N 46 dB Stereo Sensitivity : 23 μV/75Ω
Distortion (DIN)
Mono : 0.10 % (1 kHz)
Stereo : 0.20 % (1 kHz)
Signal to Noise Ratio
Mono : 74 dB DIN, (82 dB IHF)
Stereo : 65 dB DIN, (70 dB IHF)
Selectivity : 45 dB ± 300 kHz DIN
(65 dB ± 400 kHz IHF)
Capture Ratio : 1.0 dB
IF Rejection : 90 dB at 98 MHz
Image Rejection : 60 dB at 98 MHz
Stereo Separation : 50 Hz – 35 dB
1 kHz – 45 dB
10 kHz – 35 dB
De-emphasis : 50 μ sec.
Output Level : 310mV DIN
(400 Hz, 100 % Mod.) (600mV/3.3kΩ IHF)

MW Tuner Section
Tuning Range : 525kHz – 1605kHz
Usable Sensitivity : 300μV/m, 30μV (External Antenna)
Signal to Noise Ratio : 50dB
Distortion : 0.5%
Selectivity : 40 dB,± 9kHz (45 dB, ±10kHz)

LW Tuner Section
Tuning Range : 150kHz – 350kHz
Usable Sensitivity : 500μV/m, 50μV (External Antenna)
Signal to Noise Ratio : 50dB
Distortion : 0.5%
Selectivity : 40 dB, ± 9kHz (45 dB, ± 10kHz)
Dimensions : 4-1/4"(H) x 16-1/2"(W) x 12-3/8"(D)
(108 mm x 420 mm x 313 mm)
Weight : 8.82 lbs.
4.0 kg

Design and specifications subject to change without notice.

2. Removal Procedures

2-(1) Top Cover and Bottom Plate

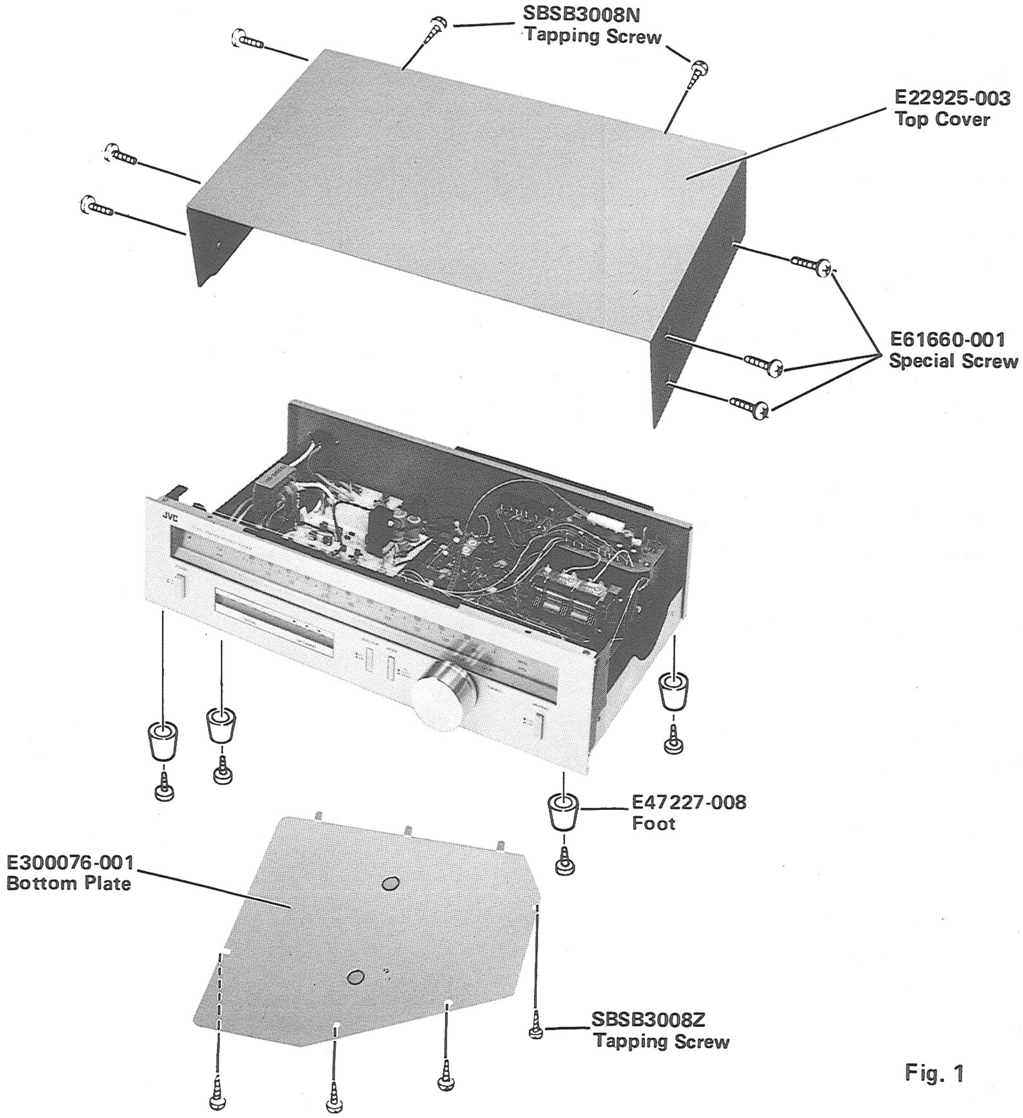

SBSB3008N
Tapping Screw
E22925-003
Top Cover
E61660-001
Special Screw
E47227-008
Foot
E300076-001
Bottom Plate
SBSB3008Z
Tapping Screw

Fig. 1

2-(2) TXX-176 Power Supply P.C. Board Ass'y

Procedures:

1. Remove the wires from 4 wire clamps (Item No. 1)
2. Lift up lead wire of dial pointer after removing a screw (See Fig. 2-A) located on Tuner P.C. Board Ass'y.
3. Place P.C. Board as shown in Fig. 2-B carefully after P.C. Board removes from 5 pcs of fastners (item No. 2).

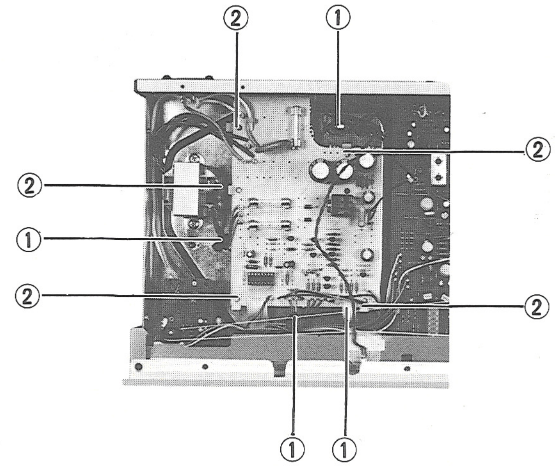


Fig. 2-A

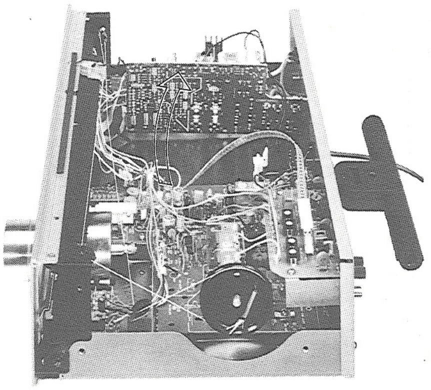
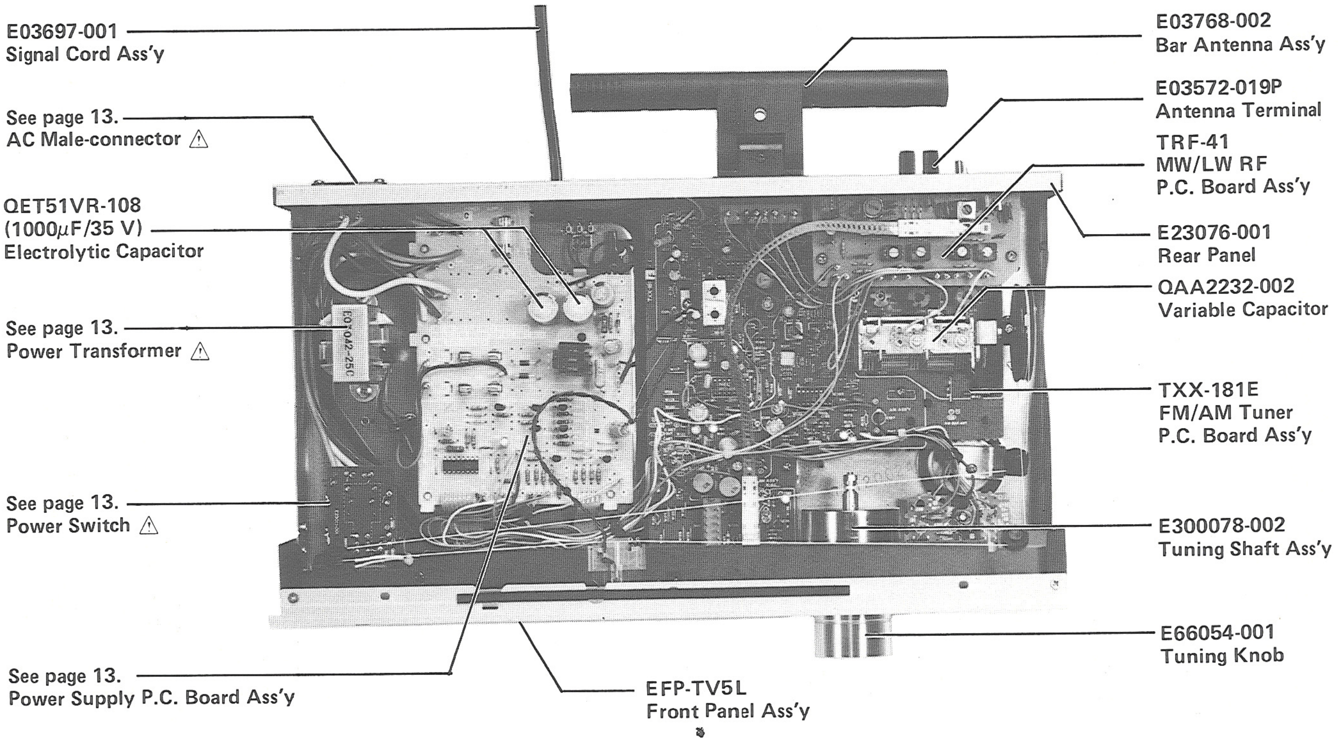


Fig. 2-B

3. Main Parts Location and Part Numbers


E03697-001
Signal Cord Ass'y
See page 13.
AC Male-connector ⚠
QET51VR-108
(1000μF/35 V)
Electrolytic Capacitor
See page 13.
Power Transformer ⚠
See page 13.
Power Switch ⚠
See page 13.
Power Supply P.C. Board Ass'y
EFP-TV5L
Front Panel Ass'y
E03768-002
Bar Antenna Ass'y
E03572-019P
Antenna Terminal
TRF-41
MW/LW RF
P.C. Board Ass'y
E23076-001
Rear Panel
QAA2232-002
Variable Capacitor
TXX-181E
FM/AM Tuner
P.C. Board Ass'y
E300078-002
Tuning Shaft Ass'y
E66054-001
Tuning Knob

⚠ : Safety Parts

Fig. 3

4. Dial Stringing Procedure

Note: No dial stringing is necessary in normal condition. If it becomes necessary, perform it as follows.
Before removing FM/AM Tuner P.C. Board, wrap the dial drum together with dial cord by using a scotch tape and remove the dial drum carefully and then fix it on the side of chassis until replacement of this P.C. Board is completed.

Take the following 7 steps (from step ① to ⑦).

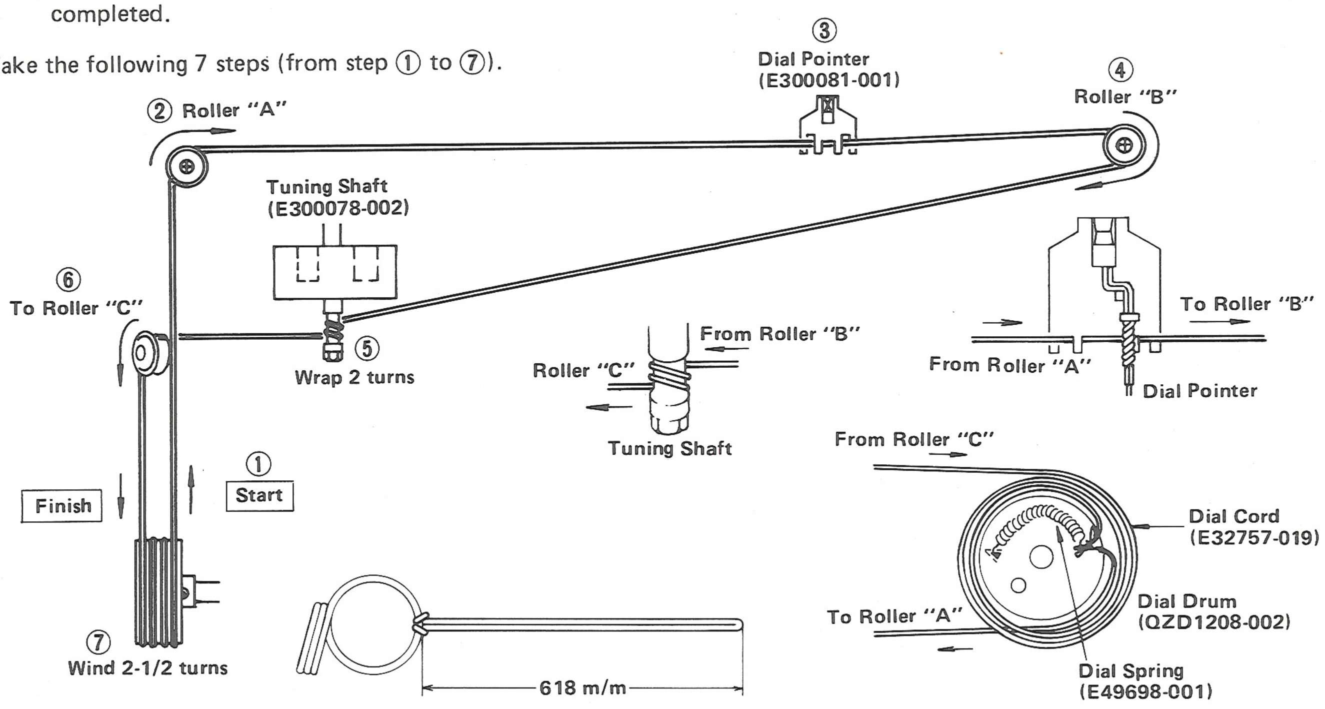
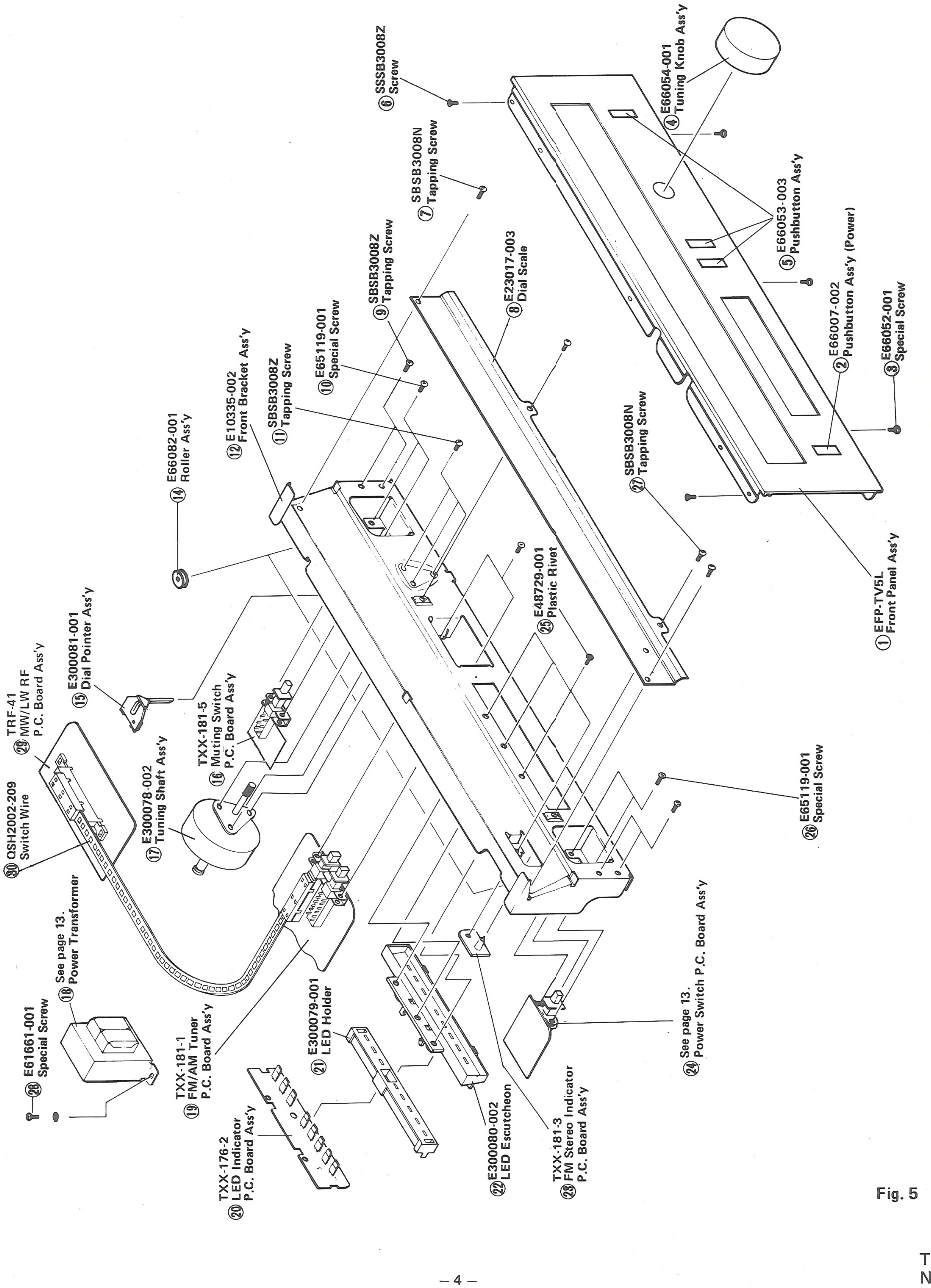

③
Dial Pointer
(E300081-001)
④
Roller "B"
② Roller "A"
Tuning Shaft
(E300078-002)
⑥
To Roller "C"
⑤
Wrap 2 turns
From Roller "B"
Roller "C"
Tuning Shaft
To Roller "B"
From Roller "A"
Dial Pointer
①
Start
Finish
⑦
Wind 2-1/2 turns
618 m/m
From Roller "C"
Dial Cord
(E32757-019)
Dial Drum
(QZD1208-002)
To Roller "A"
Dial Spring
(E49698-001)

Fig. 4

5. Exploded View and Part Numbers

5-(1) Front Panel



① EFP-TV5L Front Panel Ass'y
② E66007-002 Pushbutton Ass'y (Power)
③ E66052-001 Special Screw
④ E66054-001 Tuning Knob Ass'y
⑤ E66053-003 Pushbutton Ass'y
⑥ SSSB3008Z Screw
⑦ SBSB3008N Tapping Screw
⑧ E23017-003 Dial Scale
⑨ SBSB3008Z Tapping Screw
⑩ E65119-001 Special Screw
⑪ SBSB3008Z Tapping Screw
⑫ E10335-002 Front Bracket Ass'y
⑭ E66082-001 Roller Ass'y
⑮ E300081-001 Dial Pointer Ass'y
⑯ TXX-181-5 Muting Switch P.C. Board Ass'y
⑰ E300078-002 Tuning Shaft Ass'y
⑱ See page 13. Power Transformer
⑲ TXX-181-1 FM/AM Tuner P.C. Board Ass'y
⑳ TXX-176-2 LED Indicator P.C. Board Ass'y
㉑ E300079-001 LED Holder
㉒ E300080-002 LED Escutcheon
㉓ TXX-181-3 FM Stereo Indicator P.C. Board Ass'y
㉔ See page 13. Power Switch P.C. Board Ass'y
㉕ E48729-001 Plastic Rivet
㉖ E65119-001 Special Screw
㉗ SBSB3008N Tapping Screw
㉘ E61661-001 Special Screw
㉙ TRF-41 MW/LW RF P.C. Board Ass'y
㉚ QSH2002-209 Switch Wire

Fig. 5

5-(2) Rear Panel

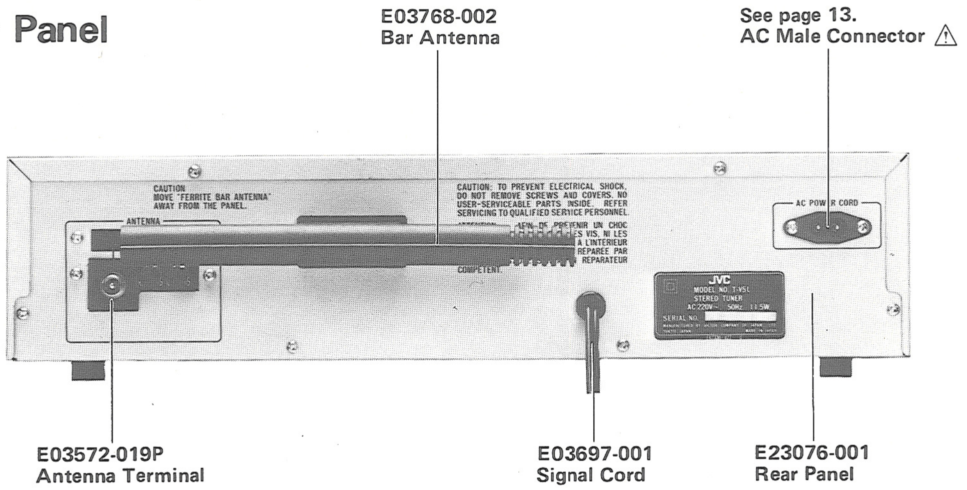

E03768-002
Bar Antenna
See page 13.
AC Male Connector ⚠
E03572-019P
Antenna Terminal
E03697-001
Signal Cord
E23076-001
Rear Panel

Fig. 6

6. FM/AM Tuner Alignment Procedures

6-(1) FM Section

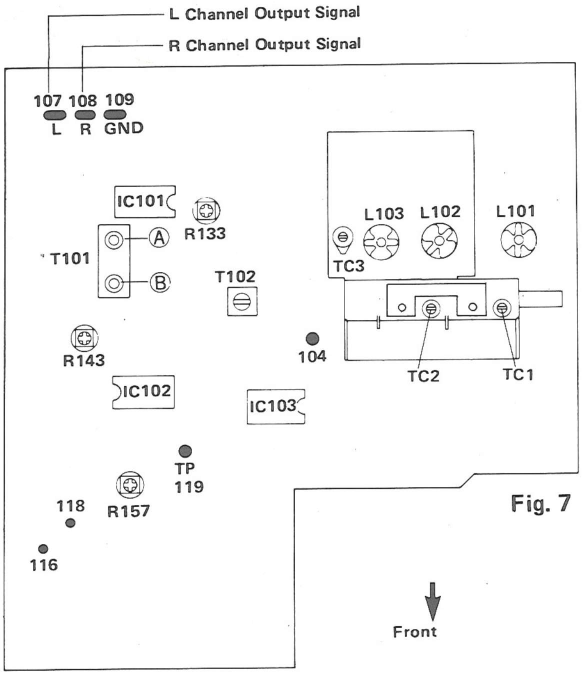

L Channel Output Signal
R Channel Output Signal
107 108 109
L R GND
IC101
Ⓐ
R133
T101
Ⓑ
T102
L103 L102
L101
TC3
R143
104
TC2
TC1
IC102
IC103
TP
119
118
R157
116
Front

Fig. 7

Alignment Location for TXX-181-1 FM/AM Tuner P.C. Board Ass'y

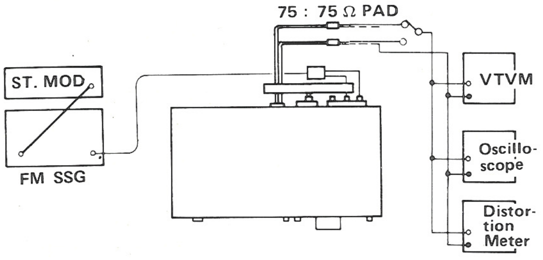

75 : 75 Ω PAD
ST. MOD
FM SSG
VTVM
Oscillo-scope
Distor-tion Meter

Fig. 8

Note: Keep in the muting pushbutton off during this procedure.

Descriminator, Center Meter, Distortion and Signal Gain

1. Connect an RF generator, 1 kHz modulation and 75 kHz deviation, to the antenna terminals on the rear panel through a dummy antenna.
2. Connect an oscilloscope, distortion meter and AC VTVM to the TAB No. 107 (Left) or 108 (Right) located on TXX-181.
3. Connect a DC VTVM to TAB No. 116 (Positive) and TAB No. 118 (Ground).
4. Tune to frequency where there is no broadcasting.
5. Adjust the core shown arrow Ⓐ of T101 so that the DC VTVM indicates "0" (zero).
6. Set the Generator to 98 MHz.
7. Set the dial pointer to 98 MHz.
8. Adjust the core shown arrow Ⓑ of T101 so that the distortion is minimized at a value less than 0.4 %.

Tracking and Sensitivity

Precaution: No adjustment is required. The tracking and sensitivity have been adjusted properly and completely at the factory. If any special reason occasioned, take the following procedures very carefully.

Low Frequency

1. Connect an RF Generator to the antenna terminals on the rear panel through a dummy antenna.
2. Set the RF Generator to 88 MHz, a modulation of 1 kHz and deviation of 75 kHz to provide an input of 2 μV.
3. Connect a VTVM and oscilloscope to the TAB No. 107 (Left) or 108 (Right).
4. Set the dial pointer to 88 MHz.
5. Adjust the three coils L103, L102 and L101 in the tuning gang to maximum the output.

High Frequency

6. Set the RF Generator to 108 MHz, a modulation of 1 kHz and a deviation of 75 kHz, to provide an input of 2 μV.
7. Set the dial pointer to 108 MHz.
8. Adjust the FM Trimmers TC3, TC2 and TC1 in the tuning gang to maximize the output.
9. Repeat these high and low frequencies adjustment alternately until maximum sensitivity is obtained.

Multiplex and Stereo Separation

Multiplex

1. Set the stereo signal generator as follows: 400 Hz modulation frequency, 7.5 kHz deviation pilot, 67.5 kHz main and sub carriers. Connect its output to an RF generator.
2. Connect the RF Generator to the antenna terminal through a dummy antenna.
3. Connect a VTVM, an Oscilloscope and a Distortion Meter to the TAB No. 107 (Left) or 108 (Right).
4. Set the RF Generator to the 98 MHz and an output of 1 mV.
5. Set the dial pointer to 98 MHz.
6. Connect the Frequency Counter to the TP (Test Point) 119.
7. Switch off the pilot signal of Stereo Modulator.
8. Adjust R143 so that the Frequency Counter indicates 19 kHz (0 ~ −50 Hz).

Stereo Separation

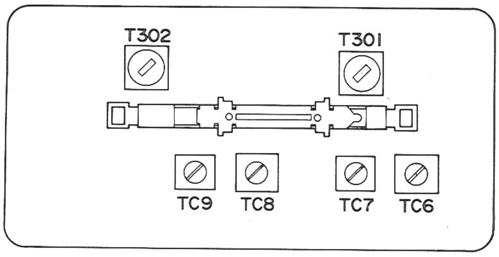
9. Switch the selector of the Stereo Modulator to Left channel modulation.
10. Adjust R157 so that the output of the Right channel is minimized.
11. Switch the selector of the modulator to Right channel modulation.
12. Adjust R157 so that the Left channel is minimized.
13. Set R157 to average, if the separation of Right and Left are different.

Muting Level

Note: ●No adjustment is necessary. However, if the checking-up is required, take the following steps.
●Keep the muting pushbutton out (ON) during this adjustment procedure.

1. Connect a VTVM and an oscilloscope to the output signal plug.
2. Set the RF generator to 108 MHz, a modulation of 1 kHz and a deviation of 75 kHz, to provide an input of 5 μV.
3. Turn R133 counterclockwise and remember the point at which the muting ceases operating.
4. Turn R133 clockwise slightly so that the output level drops by 1 dB.
5. Attenuate the output of the RF generator to 2 dB from 5 μV of step 2 and check that the muting is still operating.

MW & LW Section



TRF-41 MW/LW RF P.C. Board Ass'y

Fig. 9

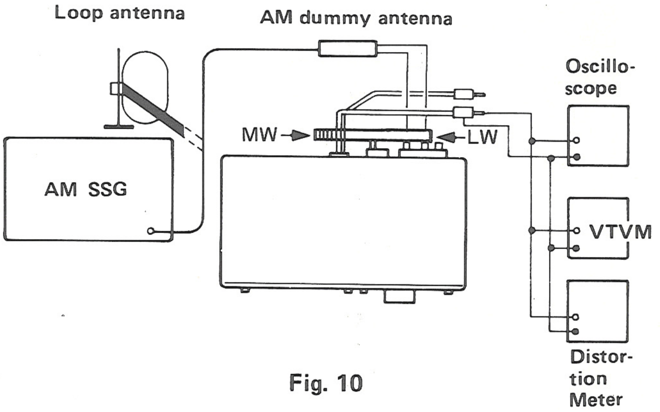


Fig. 10

Note: ( ) for LW Alignment Procedure

MW(LW) Tracking and Sensitivity

Low Frequency

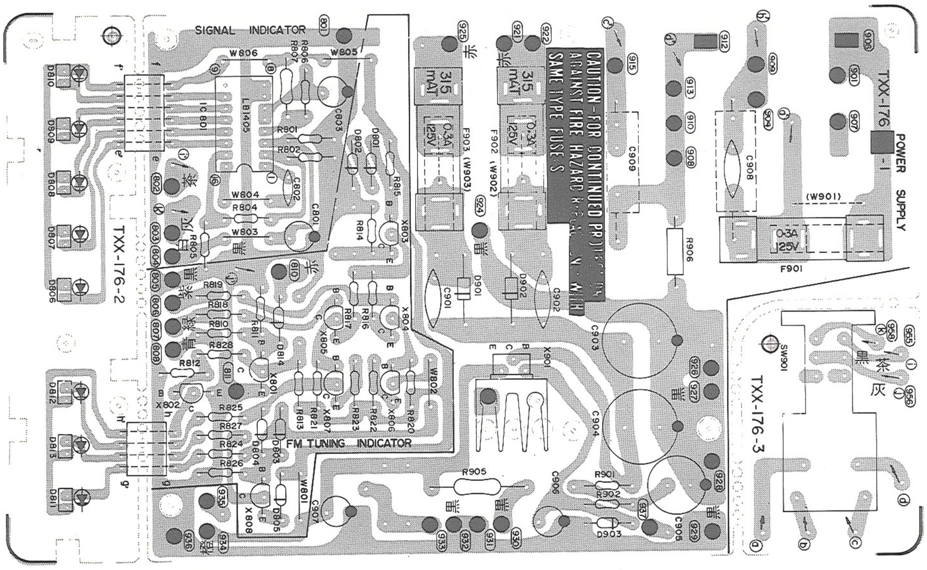
1. Connect the RF Generator to the antenna terminal on the rear panel, set this to 600kHz (160kHz) with 30% modulation at 400Hz.
2. Connect an AC VTVM and an oscilloscope to TAB No. 107 or 108.
3. Set the dial pointer to the 600kHz (160kHz).
4. Adjust OSC Transformer T302 (T301) and the ferrite bar antenna adjusting the MW (LW) coil to maximize the output signal.

High Frequency

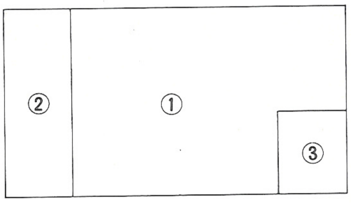
5. Set the RF Generator to 1400kHz (350kHz) with 30% modulation at 400Hz.
6. Set the dial pointer to 1400kHz (350kHz).
7. Adjust the trimmers TC9 (TC8) and TC7 (TC6) in the tuning gang so that the output signal is maximized.
8. Repeat these high and low frequencies adjustment procedures alternately until maximum sensitivity is obtained.

7. Printed Circuit Board Ass'y and Parts List

7-(1) TXX-176 Power Supply, Power Switch & LED Indicator P.C. Board Ass'y



Each Individual P.C. Board Location.



① TXX-176-1: Power Supply P.C. Board Ass'y
② TXX-176-2: LED Indication P.C. Board Ass'y
③ TXX-176-3: Power Switch P.C. Board Ass'y

Note: The specific symbols (赤.黒.白.... etc.) on a surface of P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

Fig. 11

Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT		Maker
X801	2SC458(D)	0.2W	230MHz	Silicon	Hitachi
X802	2SC458(D)	″	″	″	″
X803	2SC458(D)	″	″	″	″
X804	2SC458(D)	″	″	″	″
X805	2SC458(D)	″	″	″	″
X806	2SA1084(D)	0.4W	90MHz	″	″
X807	2SA1084(D)	″	″	″	″
X808	2SA1084(D)	″	″	″	″
X901	2SD330V(E)	20W	8MHz	″	Sanyo

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D801	1S2076-31		Silicon	Hitachi
D802	1S2076-31		″	″
D803	1S2076-31		″	″
D804	1S2076-31		″	″
D805	1S2076-31		″	″
D806	TLR205		LED	Toshiba
D807	TLR205		″	″
D808	TLR205		″	″
D809	TLR205		″	″
D810	TLR205		″	″
D811	TLR205		″	″
D812	TLR205		″	″
D813	TLG205		″	″
D814	1S2076-31		Silicon	Hitachi
D901	ERB12-02RKL1		″	Fuji
D902	ERB12-02RKL1		″	″
D903	XZ-132	Zener volt 13.2V	Zener	JRC

Capacitors

Item No.	Part Number	Rating		Description
C801	QET51ER-106	10μF	25V	Electrolytic
C802	QCS21HJ-470	47pF	50V	Ceramic
C803	QET51HR-105	1μF	″	Electrolytic
C903	QET51VR-108	1000μF	35V	″
C904	QET51VR-108	″	″	″
C905	QET51ER-477	470μF	25V	″
C906	QET51CR-107	100μF	16V	″
C907	QET51CR-107	″	″	″

Resistors

Item No.	Part Number	Rating		Description
R801	QRD141J-153S	15kΩ	1/4W	Carbon
R802	QRD141J-472S	4.7kΩ	″	″
R804	QRD141J-563S	56kΩ	″	″
R805	QRD141J-183S	18kΩ	″	″
R806	QRD141J-182S	1.8kΩ	″	″
R807	QRD129J-221	220Ω	1/2W	Uninflammable
R810	QRD141J-104S	100kΩ	1/4W	Carbon
R811	QRD141J-823S	82kΩ	″	″
R812	QRD141J-223S	22kΩ	″	″
R813	QRD141J-103S	10kΩ	″	″
R814	QRD126J-680S	68Ω	1/2W	Uninflammable
R815	QRD141J-332S	3.3kΩ	1/4W	Carbon
R816	QRD141J-470S	47Ω	″	″
R817	QRD141J-470S	″	″	″
R818	QRD141J-103S	10kΩ	″	″
R819	QRD141J-103S	″	″	″
R820	QRD149J-101S	100Ω	″	Uninflammable
R821	QRD149J-101S	″	″	″
R822	QRD149J-100S	10Ω	″	″
R823	QRD149J-100S	″	″	″
R824	QRD141J-122S	1.2kΩ	″	Carbon
R825	QRD141J-122S	″	″	″
R826	QRD141J-104S	100kΩ	″	″
R827	QRD141J-821S	820Ω	″	″
R828	QRD141J-104S	100kΩ	″	″
R901	QRD129J-102	1kΩ	1/2W	Uninflammable
R902	QRD141J-122S	1.2kΩ	1/4W	Carbon
R905	QRG027J-121	120Ω	2W	Oxide metal uninflammable

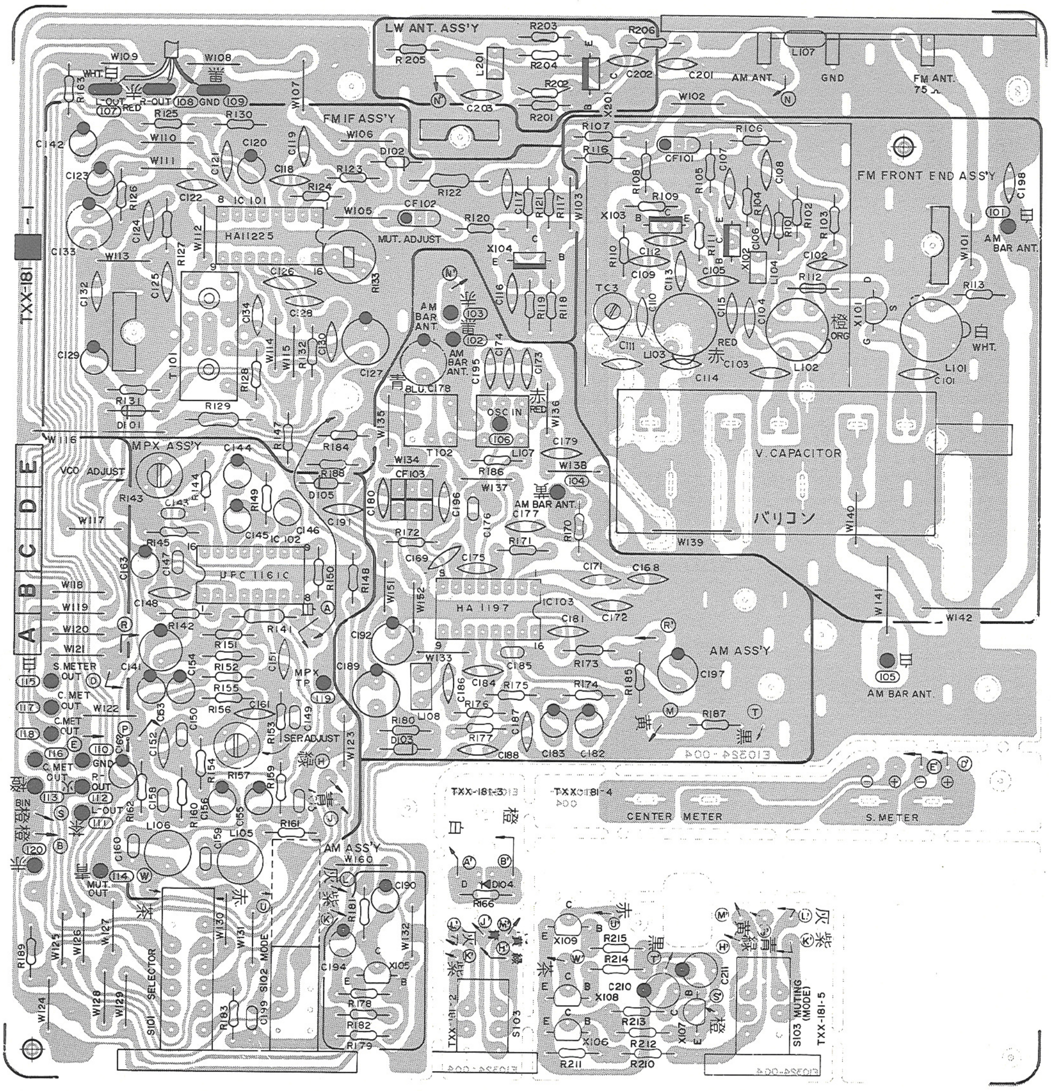
Integrated Circuits

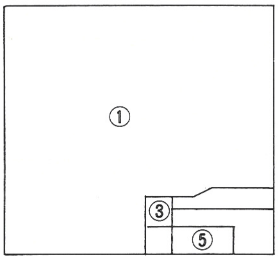
Item No.	Part Number	Rating	Description	
		Pc		Maker
IC 801	LB 1405	0.5W	IC	Sanyo

Others

Item No.	Part Number	Rating	Description
	EWR24J-10DD		Flat cable
	EWR26J-10DD		″
	E61537-002		Heat sink
	See page 13		Power switch

7-(2) TXX-181 FM/AM Tuner, Muting Switch & Stereo Indicator P.C. Board Ass'y


LW ANT. ASS'Y
FM IF ASS'Y
FM FRONT END ASS'Y
MPX ASS'Y
AM ASS'Y
V. CAPACITOR
バリコン
HA11225
μPC1161C
HA1197
MUT. ADJUST
VCO ADJUST
SEP. ADJUST
AM ANT.
GND
FM ANT. 75Ω
AM BAR ANT.
CENTER METER
S. METER
TXX-181-1
TXX-181-3
TXX-181-4
TXX-181-5
S101 SELECTOR
S102 MODE
S103 MUTING MODE



Each Individual P.C. Board Ass'y Location
① TXX-181-1 FM/AM Tuner P.C. Board Ass'y
③ TXX-181-3 FM Stereo Indicator P.C. Board Ass'y
⑤ TXX-181-5 Muting Switch P.C. Board Ass'y

Fig. 12

Note:

(1) The specific symbols (赤.黒.白 . . . etc.) on a surface of above P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

(2) No dial stringing is necessary in normal condition. If it becomes necessary, perform it as follows.
Before removing FM/AM Tuner P.C. Board, wrap the dial drum together with dial cord by using a scotch tape and remove the dial drum carefully and then fix it on the side of chassis until replacement of this P.C. Board is completed.

Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT		Maker
X101	2SK61 (GR)	0.2W	(200MHz)	FET	Toshiba
X102	2SC535 (B)	0.1W	700MHz	Silicon	Hitachi
X103	2SC1342(C)	"	250MHz	"	"
X104	2SC461(B,C)	"	700 MHz	"	"
X105	2SC458(C,D)	"	150 MHz	"	"
X106	2SC458(C,D)	"	"	"	"
X107	2SA872(E)	0.3W	120 MHz	"	"
X108	2SD655 (E,F)	0.5W	250 MHz	"	"
X109	2SD655 (E,F)	0.5W	250 MHz	"	"
X201	2SC461 (C)	0.1W	700 MHz	"	"

Integrated Circuits

Item No.	Part Number	Rating	Description	
		Pc		Maker
IC101	HA11225	0.59W	IC	Hitachi
IC102	μPC1161C	0.4W	"	NEC
IC103	HA1197	0.45W	"	Hitachi

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D102	1S2076-31		Silicon	Hitachi
D103	1S2076-31		"	"
D104	TLR206		LED	Toshiba
D105	1S2076-31		Silicon	Hitachi

Filters

Item No.	Part Number	Rating	Description
CF101	E03357-009		Ceramic filter
CF102	E03357-009		"
CF103	E03613-016		"

Coils & Transformers

Item No.	Part Number	Rating	Description
L101	E03477-031		RF coil
L102	E03477-035		"
L103	E03477-034		"
L104	E03522-1R5KY		"
L105	Y00118-103		Ferrite inductor
L106	Y00118-103		"
L107	E03695-001		Choke coil
L108	E03522-391KY		"
T101	E03793-001		FM Det. transformer
T102	E03613-009		AM IF transformer
L201	E03522-101KY		Choke coil

Capacitors

Item No.	Part Number	Rating	Description
CU92	QET61CR-476Z	47μF 16V	Electrolytic
C101	QCS31HJ-180Z	18pF 50V	Ceramic
C102	QCF31HP-103Z	0.01μF "	"
C103	QCS31HJ-180Z	18pF "	"
C104	QCS31HJ-3R0Z	3pF "	"
C105	QCS31HJ-2R0Z	2pF "	"
C106	QCS31HJ-151Z	150pF "	"
C107	QCF31HP-103Z	0.01μF "	"
C108	QCF31HP-103Z	" "	"
C109	QCF31HP-103Z	" "	"
C110	QCT05CH-7R0	7pF "	"
C111	QCT25PH-120Z	12pF "	"
C112	QCT25CH-220Z	22pF "	"
C113	QCT25CH-100Z	10pF "	"
C114	QCT25RH-120Z	12pF "	"
C115	QCS31HJ-3R0Z	3pF "	"
C116	QCF31HP-223Z	0.022μF "	"
C117	QCF31HP-223Z	" "	"
C118	QCF31HP-223Z	" "	"

Capacitors

Item No.	Part Number	Rating	Description
C119	QCF31HP-223Z	0.022μF 50V	Ceramic
C120	QET61ER-106	10μF "	Electrolytic
C121	QCS31HJ-330	33pF "	Ceramic
C122	QCF31HP-223Z	0.022μF "	"
C123	QET61HR-474	0.47μF 25V	Electrolytic
C124	QCF31HP-223Z	0.022μF 50V	Ceramic
C126	QCF21HP-223	" "	"
C127	QET61CR-476Z	47μF 16V	Electrolytic
C128	QCF21HP-223	0.022μF 50V	Ceramic
C129	QET61HR-474Z	0.47μF "	Electrolytic
C130	QCF31HP-223Z	0.022μF "	Ceramic
C133	QET51CR-476	47μF 16V	Electrolytic
C134	QCF31HP-223Z	0.023μF 50V	Ceramic
C139	QCS11HJ-101	100pF "	"
C141	QET51CR-227	220μF "	"
C142	QET61HR-475Z	4.7μ "	"
C143	QFP31HJ-471	470pF "	Polystyrol
C144	QEB51EM-335	3.3μF 25V	Electrolytic
C145	QEB51HM-105	1μF 50V	"
C146	QEZ0046-224	0.22μF "	Electrolytic (nonpolar)
C147	QFM31HK-473Z	0.047μF 50V	Mylar
C148	QCS31HJ-471	470pF "	Ceramic
C149	QFM31HK-102Z	1000pF "	Mylar
C150	QFM31HK-102	" "	"
C153	QET61ER-106	10μF 25V	Electrolytic
C154	QET61ER-106Z	" "	"
C155	QET61HR-105	1μF 50V	"
C156	QET61HR-105	" "	"
C157	QFM31HK-682Z	6800pF "	Mylar
C158	QFM31HK-682Z	" "	"
C159	QFM31HK-182Z	1800pF "	"
C160	QFM31HK-182	" "	"
C161	QCS31HJ-101Z	100pF "	Ceramic
C168	QCS31HJ-330	33 pF "	Ceramic
C169	QCS11AJ-470	47 PF "	"
C171	QCF31HP-223Z	0.022μF "	"
C172	QCF31HP-223Z	" "	"
C175	QCF31HP-223	0.022μF "	"
C177	QCF31HP-223Z	0.022μF "	Ceramic
C178	QET61CR-476Z	47μF 16V	Electrolytic
C180	QCS31HJ-470Z	47pF "	"
C181	QCF31HP-223Z	0.022μF "	"
C182	QET61HR-105Z	1μF "	Electrolytic
C183	QET51ER-106	10μF 25V	"
C184	QCF21HP-223	0.022μF 50V	Ceramic
C185	QFM31HK-102Z	1000pF "	Mylar
C186	QCS31HJ-331Z	330pF "	Ceramic
C187	QFM31HK-682Z	6800pF "	Mylar
C188	QCF31HK-223Z	0.022μF "	Ceramic
C189	QET51CR-227	220μF 16V	Electrolytic
C190	QET61HR-474Z	0.47μF 50V	"
C191	QCF31HP-223Z	0.022μF "	Ceramic
C192	QET61CR-476Z	47μF 16V	Electrolytic
C194	QET61ER-106Z	10μF 25V	"
C195	QCS31HJ-330Z	33pF 50V	Ceramic
C196	QCS31HJ-8R0Z	8pF "	"
C201	QCF31HP-223	0.022μF "	"
C202	QCF21HP-473	0.047μF "	"
C203	QFM31HK-473	0.047μF "	Mylar
TC3	QAT3001-014		Trimmer
	QAA2232-002		Tuning

Resistors

Item No.	Part Number	Rating		Description
R101	QRD141J-472SY	4.7kΩ	1/4W	Carbon
R102	QRD141J-223SY	22kΩ	″	″
R103	QRD141J-391SY	390Ω	″	″
R104	QRD141J-102SY	1kΩ	″	″
R105	QRD141J-221SY	220Ω	″	″
R106	QRD141J-561SY	560Ω	″	″
R107	QRD141J-220SY	22Ω	″	″
R108	QRD141J-222SY	2.2kΩ	″	″
R109	QRD141J-103SY	10kΩ	″	″
R110	QRD141J-682SY	6.8kΩ	″	″
R111	QRD141J-272SY	2.7kΩ	″	″
R112	QRD141J-470SY	47Ω	″	″
R116	QRD141J-221SY	220Ω	″	″
R117	QRD141J-273SY	27kΩ	″	″
R118	QRD141J-103SY	10kΩ	″	″
R119	QRD141J-471SY	470Ω	″	″
R120	QRD141J-101SY	100Ω	″	″
R121	QRD141J-331SY	330Ω	″	″
R122	QRD129J-470	47Ω	1/2W	Uninflammable
R123	QRD141J-103SY	10kΩ	1/4W	Carbon
R124	QRD141J-391SY	390Ω	″	″
R125	QRD141J-123SY	12kΩ	″	″
R126	QRD141J-271SY	270Ω	″	″
R127	QRD141J-123SY	12kΩ	″	″
R128	QRD141J-332SY	3.3kΩ	″	″
R129	QRD126J-470	47Ω	1/2W	Uninflammable
R130	QRD141J-473SY	47kΩ	1/4W	Carbon
R131	QRD141J-472SY	4.7kΩ	″	″
R132	QRD141J-683SY	68kΩ	″	″
R133	QRD141J-223	22kΩ		Variable
R136	QRD141J-124SY	120kΩ	1/4W	Carbon
R141	QRD126J-330	33Ω	1/2W	Uninflammable
R142	QRD141J-473SY	47kΩ	1/4W	Carbon
R143	QVP4A0B-472	4.7kΩ		Variable
R144	QRD141J-163SY	16kΩ	1/4W	Carbon
R145	QRD141J-683SY	68kΩ	″	″
R147	QRD141J-363SY	36kΩ	″	″
R148	QRD141J-104SY	100kΩ	″	″
R149	QRD141J-102SY	1kΩ	″	″
R150	QRD141J-102SY	″	″	″
R151	QRD141J-223SY	22kΩ	″	″
R152	QRD141J-223SY	″	″	″
R153	QRD141J-513SY	51kΩ	″	″
R154	QRD141J-513SY	″	″	″
R155	QRD141J-103SY	10kΩ	″	″
R156	QRD141J-103SY	″	″	″
R157	QVP4A0B-474	470kΩ		Variable
R159	QRD141J-332SY	3.3kΩ	1/4W	Carbon
R160	QRD141J-332SY	″	″	″
R161	QRD141J-332SY	″	″	″
R162	QRD141J-332SY	″	″	″
R166	QRD141J-222SY	2.2kΩ	″	″
R170	QRD141J-151SY	150Ω	″	″
R171	QRD141J-152SY	1.5kΩ	″	″
R172	QRD149J-101S	100Ω	″	Uninflammable
R173	QRD141J-682SY	68kΩ	″	Carbon
R174	QRD141J-103SY	10kΩ	″	″
R175	QRD141J-103SY	″	″	″
R176	QRD141J-331SY	330Ω	″	″
R177	QRD141J-103SY	10kΩ	″	″
R178	QRD141J-224SY	220kΩ	″	″
R179	QRD141J-683SY	68kΩ	″	″
R180	QRD141J-222SY	2.2kΩ	″	″
R181	QRD141J-332SY	3.3kΩ	″	″
R182	QRD141J-182SY	1.8kΩ	″	″
R183	QRD141J-473SY	47kΩ	″	″

Resistors

Item No.	Part Number	Rating		Description
R184	QRD149J-101S	100Ω	1/4W	Uninflammable
R187	QRD141J-333S	33kΩ	″	Carbon
R188	QRD141J-182S	1.8kΩ	″	″
R201	QRD141J-153SY	15kΩ	″	″
R202	QRD141J-104SY	100kΩ	″	″
R203	QRD141J-222SY	2.2kΩ	″	″
R204	QRD141J-182SY	1.8kΩ	″	″
R205	QRD129J-101	100Ω	1/2W	Uninflammable
R210	QRD149J-104S	100Ω	1/4W	″
R211	QRD141J-393S	39kΩ	″	Carbon
R212	QRD141J-223S	22kΩ	″	″
R213	QRD141J-103S	10kΩ	″	″
R214	QRD141J-223S	22kΩ	″	″
R215	QRD141J-223S	22kΩ	″	″

Others

Item No.	Part Number	Rating	Description
	E03572-019P		Antenna terminal
	E300098-001		Shield cover
	E65396-001		Grand plate
S101	QSH1P02-001		Source selector
S103	QSP0210-018		Mode
			Muting

7-(3) TRF-41 MW／LW RF P.C. Board Ass'y

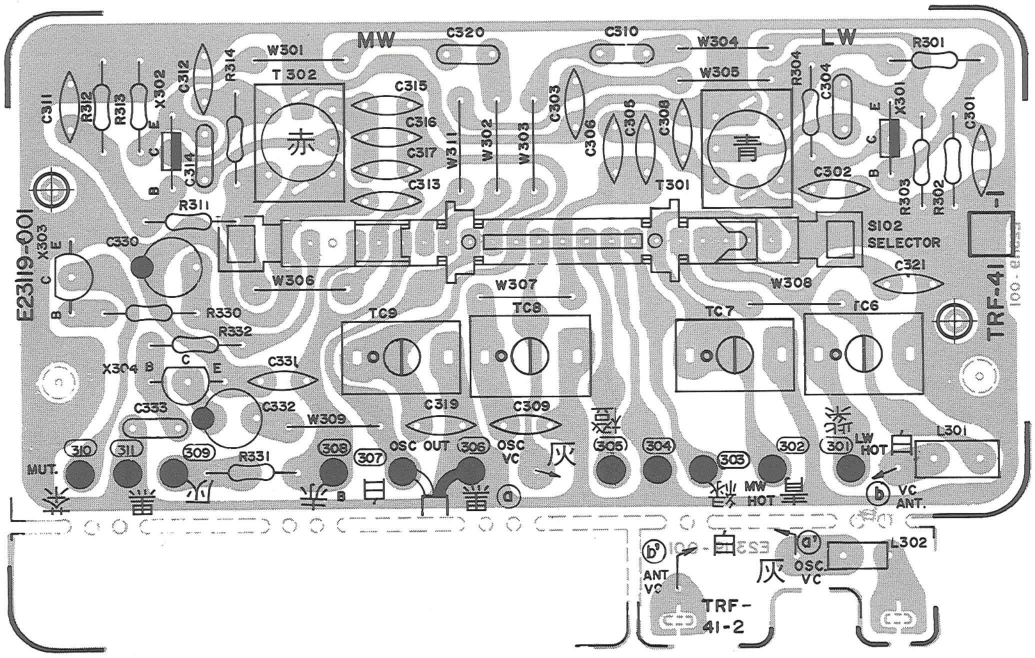

MW
LW
W301
T302
C320
C310
W304
W305
R301
C311
R312
R313
X302
C312
R314
C315
C316
C317
C313
W311
W302
W303
C303
C306
C305
C308
T301
R304
C304
X301
C301
C302
R303
R302
C314
R311
E23119-001
X303
C330
S102 SELECTOR
C321
W306
W307
W308
TRF-41
R330
R332
TC9
TC8
TC7
TC6
X304
C331
C333
C332
C319
C309
W309
L301
R331
MUT.
OSC OUT
OSC VC
LW HOT
MW HOT
VC ANT.
赤
青
灰
白
L302
ANT VC
OSC VC
TRF-41-2

Fig. 13

Note: The specific symbols (赤.黒.白 . . . . etc.) on a surface of P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X301	2SC461(B)	200mW	230MHz	Silicon	Hitachi
X302	2SC461(B)	"	"	"	"
X303	2SC458(C)	"	"	"	"
X304	2SC458(C,D)	"	"	"	"

Coils & Transformer

Item No.	Part Number	Rating	Description	
T301	E03079-38	LW OSC Coil		
T302	E03079-39	MW OSC Coil		
L301	E03522-2R2KY	Choke Coil		
L302	"	"		

Capacitors

Item No.	Part Number	Rating		Description
C301	QCF21HP-473	0.047μF	50V	Ceramic
C302	QCS21HJ-560	56PF	"	"
C303	QCF21HP-473	0.047μF	"	"
C304	QFM31HK-223	0.022μF	"	Mylar
C305	QCT26CH-680	68PF	16V	Ceramic
C306	QCT26CH-680	68PF	"	"
C308	QCT26UJ-270	27PF	"	"
C309	QCT26CH-220	22PF	"	"
C310	QFM31HK-333	0.033μF	50V	Mylar
C311	QCF21HP-473	0.047μF	"	Ceramic
C312	QCS21HJ-100	10PF	"	"
C313	QCF21HP-473	0.047μF	"	"
C314	QFM31HK-103	0.01μF	"	Mylar
C315	QCT26PH-151	150PF	16V	Ceramic
C316	QCT26PH-151	150PF	"	"
C317	QCS21HJ-330	33PF	50V	"
C319	QCT26UJ-100	10PF	16V	"
C320	QFM31HK-153	0.015μF	50V	Mylar
C321	QCS21HJ-220	22PF	"	Ceramic
C330	QET51HR-474	0.47μF	"	Electrolytic
C331	QCF21HP-473	0.047μF	"	Ceramic
C332	QET51HR-105	1μF	"	Electrolytic

Resistors

Item No.	Part Number	Rating	Description
R301	QRD148J-393S	39kΩ 1/4W	Carbon
R302	QRD148J-682S	6.8kΩ "	"
R303	QRD148J-182S	1.8kΩ "	"
R304	QRD148J-821S	820Ω "	"
R311	QRD148J-393S	39kΩ "	"
R312	QRD148J-822S	8.2kΩ "	"
R313	QRD148J-152S	1.5kΩ "	"
R314	QRD148J-821S	820Ω "	"
R321	QRD148J-103S	10kΩ "	"
R330	QRD148J-223S	22kΩ "	"
R331	QRD148J-103S	10kΩ "	"

Others

Item No.	Part Number	Rating	Description
TC6	QAT2001-005		Trimmer for LW
TC7	QAT2001-001		Trimmer for MW
TC8	QAT2001-005		Trimmer for LW
TC9	QAT2001-001		Trimmer for MW
S102	QSS7201-501		Band Selector

8. Packing Materials and Part Numbers

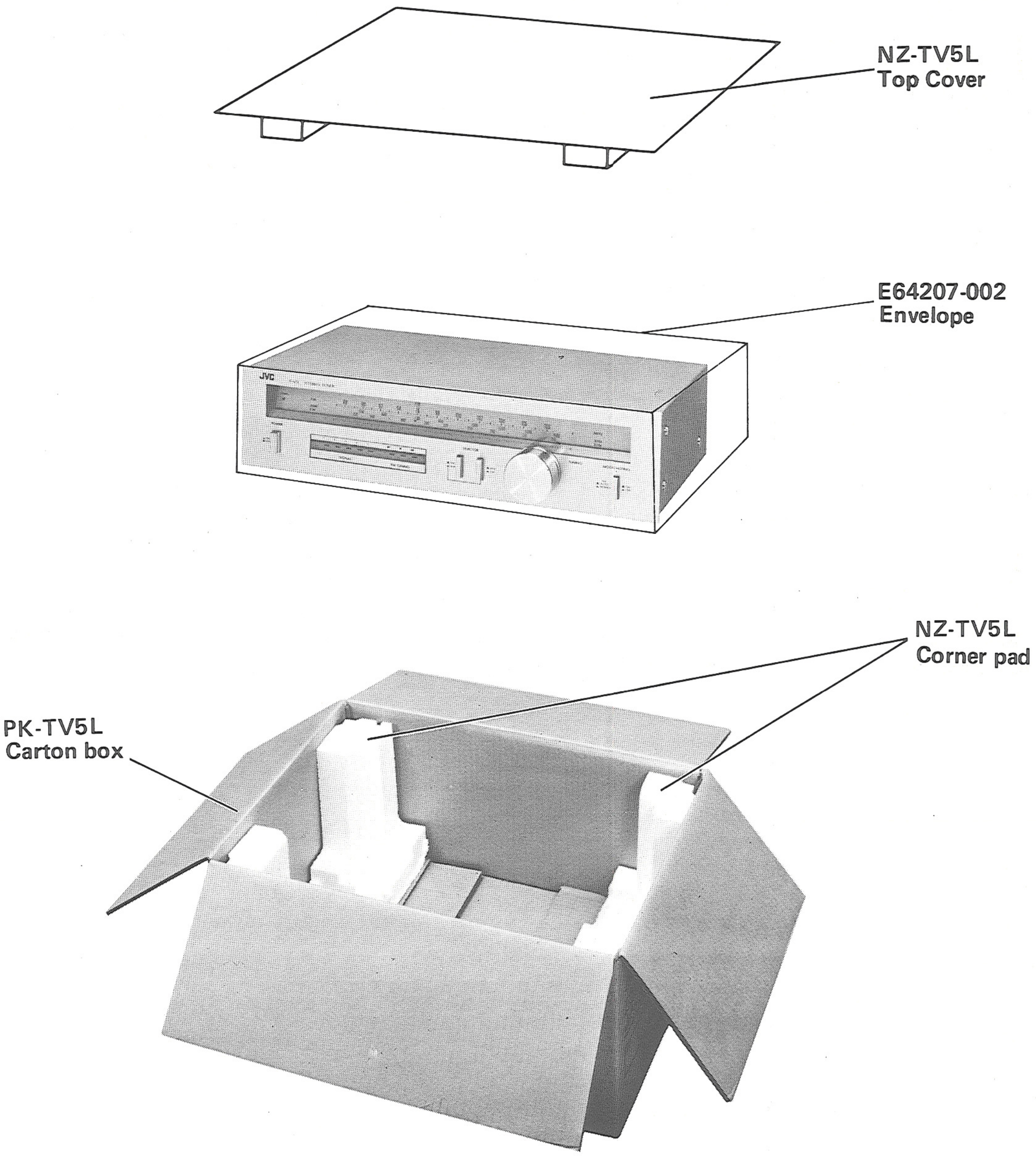

NZ-TV5L
Top Cover
E64207-002
Envelope
NZ-TV5L
Corner pad
PK-TV5L
Carton box
JVC

Fig. 14

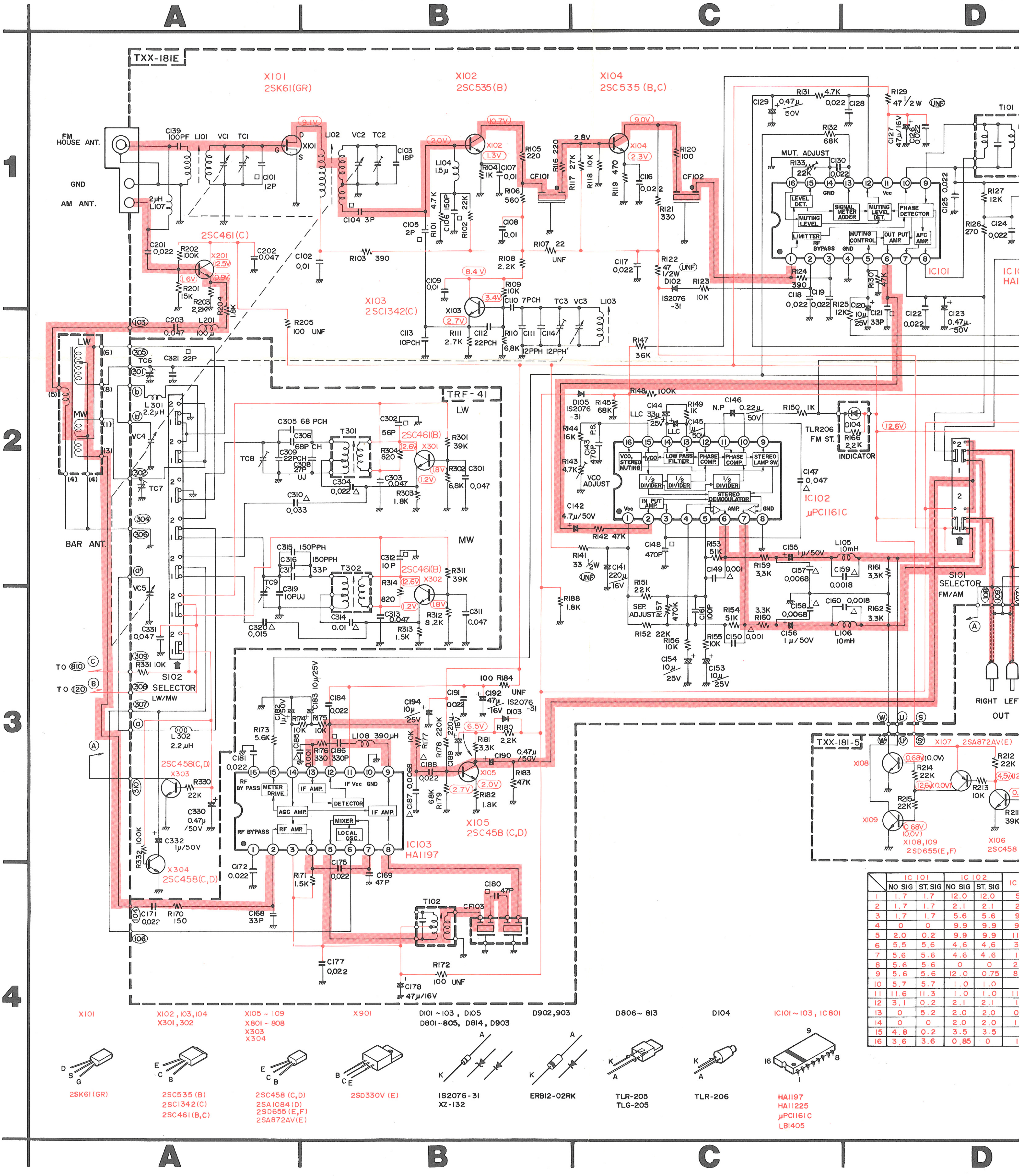
9. Accessories List

Part Number	Description	Q'ty
E30580-734A	Instruction Book	1
See page 13	Warranty Card	1
E41202-2	Envelope for Instruction Book and Warranty Card	1
See page 13	Power cord	1

11. Parts List with Specified Numbers for Designated Areas

Page	Description	For U.K.	For European Countries
3, 4	⚠Power Transformer	E03042-25CBS	E03042-25C
3	⚠AC Block P.C. Board Ass'y	TXX-176CBS	TXX-176C
3,4,7	⚠ Power Switch	QSP0020-002BS	QSP0020-002
12	⚠Power Cord	QMP9017-009BS	QMP3950-183
3	⚠Fuse (Primary) ⚠Fuse (Secondary) ⚠Power Switch	QMF51A2-R10LBS QMF51A2-R315LBS QSP0020-002BS	QMF51A2-R10L QMF51A2-R315L QSP0020-002
3, 5	⚠AC Male Connector	QMC0239-002BS	QMC0239-002
12	Warranty card	BT20013B	—

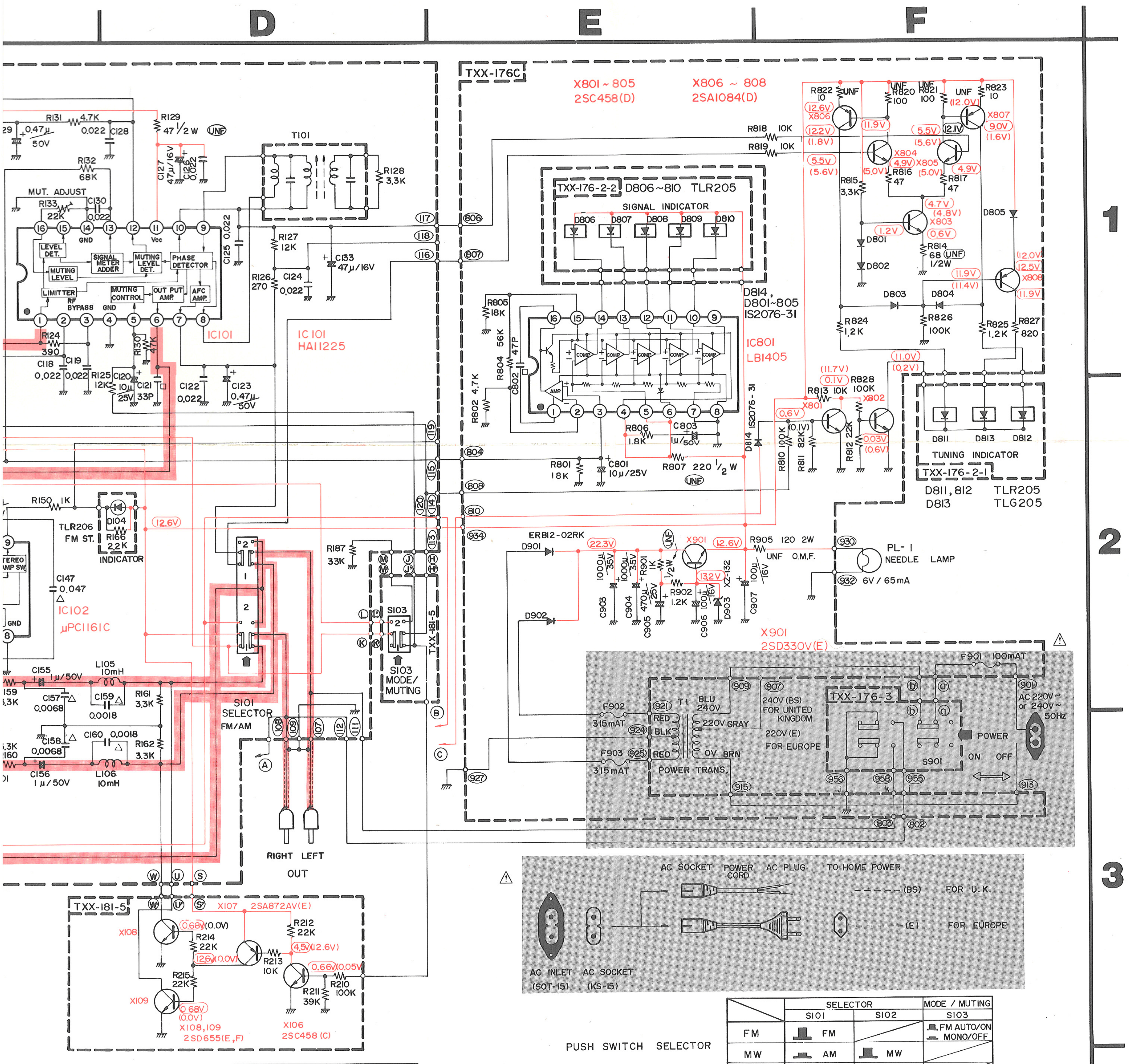
12. T-V5L Schematic Diagram


A
B
C
D
1
2
3
4
TXX-181E
TRF-41
TXX-181-5
X101 2SK61(GR)
X102 2SC535(B)
X104 2SC535(B,C)
X103 2SC1342(C)
X201 2SC461(C)
X301 2SC461(B)
X302 2SC461(B)
X303 2SC458(C,D)
X304 2SC458(C,D)
X105 2SC458(C,D)
X107 2SA872AV(E)
X108,109 2SD655(E,F)
X106 2SC458
IC101
IC102 μPC1161C
IC103 HA1197
FM HOUSE ANT.
GND
AM ANT.
BAR ANT.
LW
MW
S102 SELECTOR LW/MW
S101 SELECTOR FM/AM
MUT. ADJUST
VCO ADJUST
SEP. ADJUST
TLR206 FM ST. INDICATOR
RIGHT
LEFT
OUT
TO 810
TO 120
UNF
X101
X102, 103, 104 X301, 302
X105 ~ 109 X801 ~ 808 X303 X304
X901
D101 ~ 103, D105 D801 ~ 805, D814, D903
D902, 903
D806 ~ 813
D104
IC101 ~ 103, IC801
2SK61(GR)
2SC535(B) 2SC1342(C) 2SC461(B,C)
2SC458(C,D) 2SA1084(D) 2SD655(E,F) 2SA872AV(E)
2SD330V(E)
1S2076-31 XZ-132
ERB12-02RK
TLR-205 TLG-205
TLR-206
HA1197 HA1225 μPC1161C LB1405

	IC 101		IC 102	
	NO SIG	ST. SIG	NO SIG	ST. SIG
1	1.7	1.7	12.0	12.0
2	1.7	1.7	2.1	2.1
3	1.7	1.7	5.6	5.6
4	0	0	9.9	9.9
5	2.0	0.2	9.9	9.9
6	5.5	5.6	4.6	4.6
7	5.6	5.6	4.6	4.6
8	5.6	5.6	0	0
9	5.6	5.6	12.0	0.75
10	5.7	5.7	1.0	1.0
11	11.6	11.3	1.0	1.0
12	3.1	0.2	2.1	2.1
13	0	5.2	2.0	2.0
14	0	0	2.0	2.0
15	4.8	0.2	3.5	3.5
16	3.6	3.6	0.85	0

Printed Circuit Board Ass'y Locations

P.C. Board Ass'y	Description	Page
TXX-176	Power Supply, Power Switch LED Indicator P.C. Board Ass'y	7
TXX-181	FM/AM Tuner, Muting Switch & Stereo Indicator P.C.Board Ass'y	8
TRF-41	MW/LW RF P.C.Board Ass'y	11

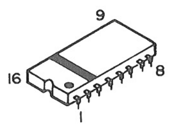

D
E
F
1
2
3
4
TXX-176C
X801 ~ 805
2SC458(D)
X806 ~ 808
2SA1084(D)
TXX-176-2-2 D806~810 TLR205
SIGNAL INDICATOR
D814, D801~805 IS2076-31
IC801 LB1405
TXX-176-2-1
TUNING INDICATOR
D811, 812 D813
TLR205 TLG205
IC101 HA11225
IC102 μPC1161C
T101
MUT. ADJUST
LEVEL DET.
SIGNAL METER ADDER
MUTING LEVEL DET.
PHASE DETECTOR
MUTING LEVEL
LIMITTER
RF BYPASS
MUTING CONTROL
OUT PUT AMP.
AFC AMP.
TLR206 FM ST.
D104
INDICATOR
S101 SELECTOR FM/AM
S103 MODE/ MUTING
TXX-181-5
RIGHT LEFT
OUT
X107 2SA872AV(E)
X108, 109 2SD655(E,F)
X106 2SC458 (C)
ERB12-02RK D901
X901 2SD330V(E)
PL-1 NEEDLE LAMP
6V / 65mA
F901 100mAT
F902 315mAT
F903 315mAT
T1 POWER TRANS.
BLU 240V
RED
BLK
220V GRAY
0V BRN
240V (BS) FOR UNITED KINGDOM
220V (E) FOR EUROPE
TXX-176-3
S901
POWER
ON OFF
AC 220V~ or 240V~ 50Hz
AC SOCKET
POWER CORD
AC PLUG
TO HOME POWER
-------(BS) FOR U.K.
-------(E) FOR EUROPE
AC INLET (SOT-15)
AC SOCKET (KS-15)

PUSH SWITCH SELECTOR

	SELECTOR		MODE / MUTING
	S101	S102	S103
FM	▇ FM		▇ FM AUTO/ON ▂ MONO/OFF
MW	▂ AM	▇ MW	
LW	▂ AM	▂ LW	

	IC 101		IC 102		IC 103	IC 801	
	NO SIG	ST. SIG	NO SIG	ST. SIG		NO SIG	SIG
1	1.7	1.7	12.0	12.0	5.1	0.66	0.65
2	1.7	1.7	2.1	2.1	2.0	0.1	0.3
3	1.7	1.7	5.6	5.6	9.8	0.1	0.3
4	0	0	9.9	9.9	9.1	10.3	10.3
5	2.0	0.2	9.9	9.9	11.9	2.8	2.8
6	5.5	5.6	4.6	4.6	3.7	2.8	2.8
7	5.6	5.6	4.6	4.6	1.3	0	0
8	5.6	5.6	0	0	2.9	0	0
9	5.6	5.6	12.0	0.75	8.0	—	—
10	5.7	5.7	1.0	1.0	0	11.3	10.9
11	11.6	11.3	1.0	1.0	11.8	11.3	10.9
12	3.1	0.2	2.1	2.1	1.6	11.3	10.9
13	0	5.2	2.0	2.0	0.7	11.3	10.9
14	0	0	2.0	2.0	1.2	11.3	10.9
15	4.8	0.2	3.5	3.5	0	0.36	3.94
16	3.6	3.6	0.85	0	1.0	0.73	4.73

IC101 ~ 103, IC801



HA1197
HA11225
μPC1161C
LB1405

NOTE

NONE MARK RESISTOR		1/4 W	CARBON (5%)
UNF MARK	〃	1/4 W	UNFLAMABLE (5%)
(UNF) MARK	〃	1/2 W	UNFLAMABLE (5%)
COMP. MARK	〃	1/2 W	COMPOSITION (10%)
UNF O.M.F. MARK	〃		UNFLAMABLE OXIDE METAL FILM

NONE MARK CAPACITOR		50V	CERAMIC (YZ)
□ MARK	〃	50V	〃 (SL, 5%)
△ MARK	〃	50V	MYLAR (10%)
⫲ MARK	〃		E. CAPACITOR
LLC MARK	〃		E. CAPA. LLC (20%)
P.S. MARK	〃		POLY STYROL (5%)
NP MARK	〃		N.P.E. CAP.

1) FOR ALL VOLTAGE MEASUREMENTS LINE VOLTAGE = 220V or 240V AC
2) ⬭ INDICATES DC VOLTAGE MEASURED WITH DC VTVM TO CHASSIS WITH NO SIGNAL IN PUT (MUTING ON)
3) ( ) INDICATES DC VOLTAGE WITH 1mV RF INPUT

Notes:

1. Parts in red indicate transistors or ICs.
2. ▬ indicates signal path.
3. —— indicates positive B power supply.
4. When replacing the parts in the darkened area ▨ and those marked with ⚠ be sure to use the designated parts to ensure safety.
5. This is the standard circuit diagram.
The design and contents are subject to change without notice.

MODEL **T-V5L**

SERVICE MANUAL

SUPPLEMENT

Use this supplement together with original service manual.

How to remove/mount the flexible wire of remote switch employed for the T-V5L.

When removing the LW circuit board for servicing the models, exercise care with the following points:

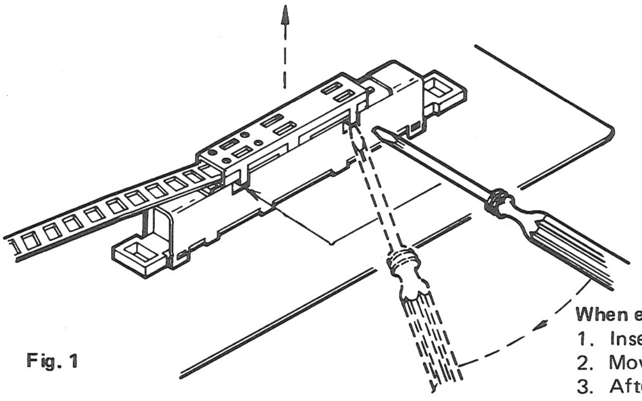


Fig. 1

When employing a knob driver.

1. Insert the tip of the driver into the openings in the switch.
2. Move the driver down so that the claws of the switch open.
3. After opening both claws, lift the mold portion.

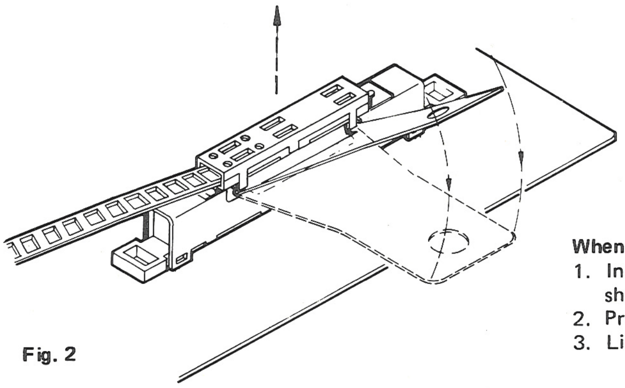


Fig. 2

When employing a JVC standard tool.

1. Insert the pawls of the JVC tool into the openings in the switch as shown in Fig. 2.
2. Press the tool down to disengage the claws of the switch.
3. Lift the mold portion to remove it.

When mounting the circuit board, align the claws and depress the mold portion.
Note: Be most careful when handling the flexible wire.
Do not bend it sharply or twist it.

Corrections of the T-V5L

The AC primary switch of the power supply circuit is corrected as shown.

Schematic diagram

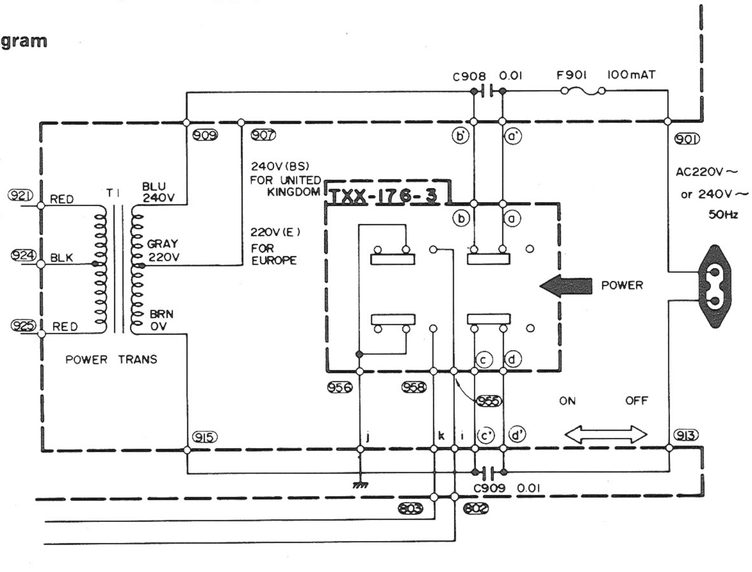

C908 0.01
F901 100mAT
909
907
b'
a'
901
240V (BS)
FOR UNITED KINGDOM
TXX-176-3
AC220V ~
or 240V ~
50Hz
921
RED
T1
BLU
240V
b
a
924
BLK
GRAY
220V
220V (E)
FOR EUROPE
POWER
925
RED
BRN
0V
POWER TRANS
c
d
956
958
955
ON
OFF
915
j
k
i
c'
d'
913
C909 0.01
803
802

Fig. 3

No. 2483-B
T-V5L
MAY 1979